

High Level Overview of DOMS nc4 Output File Structure

Attribute/Variable blocks	Description
Dimensions	data array dimension (ie. all data arrays indexed by MatchupID)
Global Attributes	CF & ACCD global attributes (mandatory + recommended per these standards)
DOMS Global Attributes/Group	Metadata Group containing DOMS specific matchup global attributes NOT covered by standard attributes (could alternatively be just normal globals with attribute names prefixed by "DOMS_")
Satellite Data Group	Group containing matched Satellite Lat, Lon, Time, Measurements, PlatformType, Metastring, & projection variables all indexed by matchupID
In-situ Data Group	Group containing matched In-situ Lat, Lon, Time, Measurements, PlatformType, Metastring, & projection variables all indexed by matchupID (potentially 1-to-many relation with corresponding matched satellite

Draft DOMS Output File Specification: netCDF4 with CF/ACDD compliant metadata

Node (Element)	Attribute	Definition	Attribute_Java	Notes/Comments
Definitions: See https://www.rack-n-reduce.gov/draftFormSpecs/netCDF4.0				
Group-Institution:Var-Measured	300	grid_mapping = "UTM"	grid_mapping	"UTM"
Group-Institution:Var-Measured	311	comment = "MDIF level-2 sea surface salinity values."		If the choice is made to not include gridmapping option metadata existing in the product then eliminate this line and the mdif_level2 = "true" line.
Group-Institution:Var-Measured	312	time	time	time interval (interval = 1 day)
Group-Institution:Var-Measured	313	interval	interval	interval (interval = 1 day)
Group-Institution:Var-Measured	314	metadata_link = "http://.../..."	metadata_link	URL pointing to satellite dataset description record in the HDOAD portal catalog
Group-Institution:Var-Measured	315	checksum	checksum	MD5 checksum of the file
Group-Institution:Var-Projection	316	grid_mapping_name = "latitude_longitude"	grid_mapping_name	grid mapping name
Group-Institution:Var-Projection	317	standard_parallel = "60"	standard_parallel	standard parallel
Group-Institution:Var-Projection	318	semi_major_axis = 6378137.0	semi_major_axis	semi-major axis
Group-Institution:Var-Projection	319	inverse_flattening = 298.257223563	inverse_flattening	inverse flattening
Group-Institution:Var-Projection	320	Optional	comment = "Variable contained in masked dataset"	comment = "Variable contained in masked dataset"

Draft DOMS Output File Specification: Corresponding CSV

Comprised of a header block at the top with the same DOMS globals as the nc4 output

A row of column field names based on the nc4 file Variable StandardName concatenated with the corresponding units as necessary

Global Attribute Name	Example	Note
Conventions	CF-1.6, ACDD-1.3	Static value
title	DOMS satellite-instrument matchup output file	Static value
history	Processing_Version = V1.0, Software_Name = DOMS, Software_Version = 1.03	Static value
institution	JPL, FSU, NCAR	Static value
source	doms.jpl.nasa.gov	Static value
standard_name_vocabulary	CF Standard Name Table v27, BODC controlled vocabulary	Static value
cdm_data_type	Point/Profile, Swath/Grid	Static value
processing_level	4	Static value
project	Distributed Oceanographic Matchup System (DOMS)	Static value
keywords_vocabulary	NASA Global Change Master Directory (GCMD) Science Keywords	Static value
keywords		Intentionally blank
creator_name	NASA PO.DAAC	Static value
creator_email	podaac@podaac.jpl.nasa.gov	Static value
creator_url	https://podaac.jpl.nasa.gov/	Static value
publisher_name	NASA PO.DAAC	Static value
publisher_email	podaac@podaac.jpl.nasa.gov	Static value
publisher_url	https://podaac.jpl.nasa.gov/	Static value
acknowledgment	DOMS is a NASA-funded project. NRA NNH14ZDA001N.	Static value
Platform	orbiting satellite, drifting surface float, moored surface buoy, ship, drifting sub	Static value
time_coverage_start	2013-10-21T00:00:00-0000	Match-up search domain start time
time_coverage_end	2013-10-31T23:59:59+0000	Match-up search domain end time
geospatial_lon_min	-30	Match-up search domain minimum longitude
geospatial_lat_min	15	Match-up search domain minimum latitude
geospatial_lon_max	-45	Match-up search domain maximum longitude
geospatial_lat_max	30	Match-up search domain maximum latitude
geospatial_lat_resolution	point	Static value
geospatial_lon_resolution	point	Static value
geospatial_lat_units	degrees_north	Static value
geospatial_lon_units	degrees_east	Static value
geospatial_vertical_min	0	Match-up search domain minimum depth
geospatial_vertical_max	5	Match-up search domain maximum depth
geospatial_vertical_units	m	Static value
geospatial_vertical_resolution	point	Static value
geospatial_vertical_positive	down	Static value
DOMS_matchID	957a8b6a-fd5-4a6e-abfa-0fd9065ac3bb	DOMS execution ID
DOMS_TimeWindow		24 DOMS time tolerance
DOMS_TimeWindow_Units	hours	Static value
DOMS_depth_min		0 Match-up search domain minimum depth
DOMS_depth_min_units	m	Static value
DOMS_depth_max		5 Match-up search domain maximum depth
DOMS_depth_max_units	m	Static value
DOMS_platforms	1,2,3,4,5,6,7,8,9	Multiple platforms selected
DOMS_SearchRadius	m	24000 Match-up radius tolerance
DOMS_SearchRadius_Units		Static value
DOMS_bounding_box	-30,15,-45,30	Match-up search domain bounding box (West, South, East, North)
DOMS_primary	AVHRR_OI_L4_GHRSST_NCEI	Match-up primary dataset name
DOMS_match_up	icoads,spurs	Match-up source(s)
DOMS_ParameterPrimary	sst	Match-up primary parameter of interest
DOMS_time_to_complete		23 Match-up execution time
DOMS_time_to_complete_units_seconds		Static value
DOMS_num_matchup_matched	3394	Total number of matchup values matched
DOMS_num_primary_matched	3394	Total number of primary values with at least one match
DOMS_num_matchup_checked	N/A	Static value
DOMS_num_primary_checked	N/A	Static value
date_modified	2017-01-31T23:37:17+0000	Date and time this CSV file was created
date_created	2017-01-31T23:37:17+0000	Date and time this CSV file was created

In-situ Data
 source lon lat time platform sea_water_salinity depth_sea_water_salinity sea_water_temperature wind_speed wind_direction wind_u wind_v